

Claims

1. A polypeptide encoded by a DNA sequence selected from:

(a) nucleotides 2026 through 3765 of SEQ ID NO:1; and

(b) DNA sequences that hybridize to a nucleotide sequence complementary to nucleotides 2026 through 3765 of SEQ ID NO:1 under moderately stringent conditions, wherein the DNA sequence encodes a polypeptide that produces an immune response to HER-2/neu protein.

2. A polypeptide having the amino acid sequence of SEQ ID NO:2 from lysine, amino acid 676, through valine, amino acid 1255, or a variant thereof that produces at least an equivalent immune response.

3. A polypeptide according to claim 2 having the amino acid sequence of SEQ ID NO:2 from amino acid 676 through amino acid 1255.

4. A composition comprising a polypeptide according to any one of claims 1, 2 or 3, in combination with a pharmaceutically acceptable carrier or diluent.

5. A nucleic acid molecule directing the expression of a polypeptide according to any one of claims 1, 2 or 3.

6. A viral vector directing the expression of a polypeptide according to any one of claims 1, 2 or 3.

Sub C' 7. A method for eliciting or enhancing an immune response to HER-2/neu protein, comprising administering to a

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~~7. A method according to claim 1 wherein the step of administering comprises administering to a warm-blooded animal in an amount effective to elicit or enhance said response a polypeptide according to any one of claims 1, 2 or 3, or a nucleic acid molecule according to claim 5, or a viral vector according to claim 6.~~

8. A method according to ~~claim 7~~ wherein the step of administering comprises transfecting cells of the animal ex vivo with the nucleic acid molecule and subsequently delivering the transfected cells to the animal.

9. A method according to claim 7 wherein the step of administering comprises infecting cells of the animal ex vivo with the viral vector and subsequently delivering the infected cells to the animal.

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7. A method according to claim 1 wherein the step of administering comprises administering to a warm-blooded animal in an amount effective to elicit or enhance said response a polypeptide according to any one of claims 1, 2 or 3, or a nucleic acid molecule according to claim 5, or a viral vector according to claim 6.

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